

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
17 November 2005 (17.11.2005)

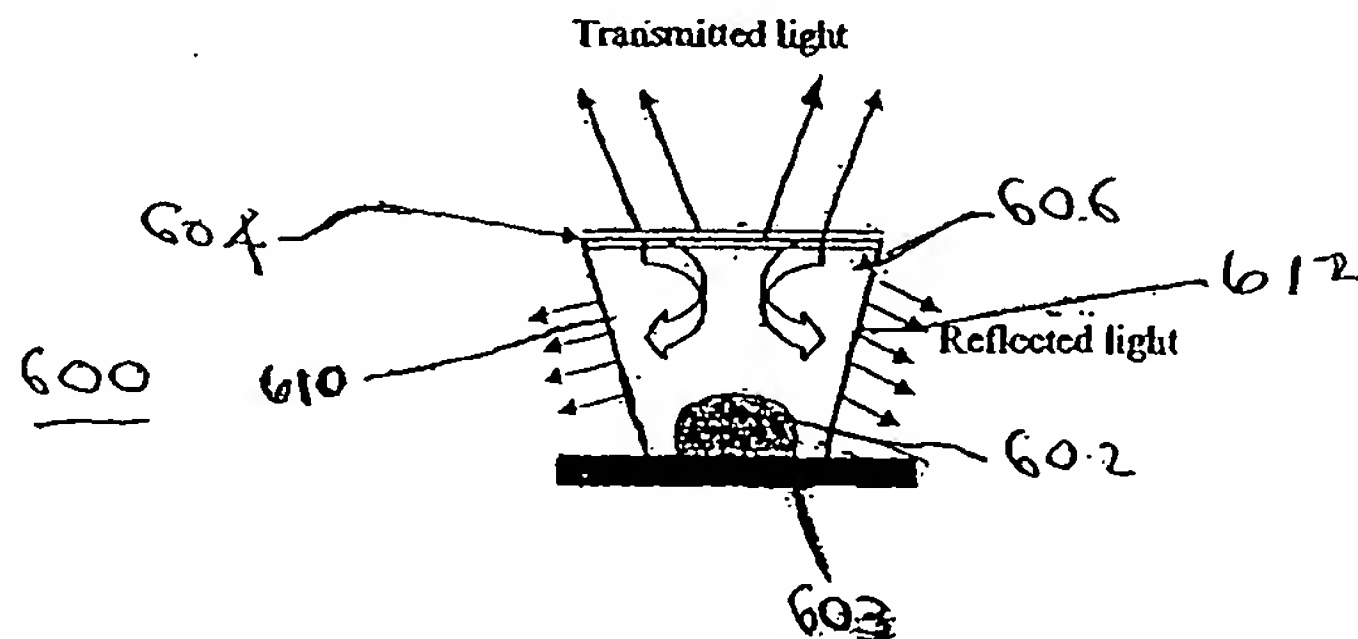
PCT

(10) International Publication Number  
**WO 2005/107420 A2**

- (51) International Patent Classification: Not classified
- (21) International Application Number: PCT/US2005/015736
- (22) International Filing Date: 5 May 2005 (05.05.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/568,373 5 May 2004 (05.05.2004) US  
60/636,123 15 December 2004 (15.12.2004) US
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:  
— without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: HIGH EFFICIENCY LIGHT SOURCE USING SOLID-STATE EMITTER AND DOWN-CONVERSION MATERIAL



(57) Abstract: A light emitting apparatus includes a source of light for emitting light; a down conversion material receiving the emitted light, and converting the emitted light into transmitted light and backward transmitted light; and an optic device configured to receive the backward transmitted light and transfer the backward transmitted light outside of the optic device. The source of light is a semiconductor light emitting diode, which may include a light emitting diode (LED), a laser diode (LD), or a resonant cavity light emitting diode (RCLED). The down conversion material includes one of phosphor or other material for absorbing light in one spectral region and emitting light in another spectral region. The optic device, or lens, includes a light transmissive material.

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